

### **REMARKS**

Claims 1, 15, and 37 have been cancelled, without prejudice.

Claim 29 has been amended to recite the transitional phrase "consisting of" in the preamble. Support for this amendment is found in the specification at, for example, paragraph 8, paragraph 20, paragraph 48, lines 1-7, paragraphs 85-90, and original claim 1. The published specification, U.S. 2001/0009679, is referenced. See *In re Gardner*, 177 USPQ 396, 397 (CCPA 1973) and MPEP §§ 608.01(o) and (I).

Claims 3, 7, 10, 12, 14, 17, and 28 have been amended to depend from independent claim 36.

No new matter has been added by any of the amendments.

### **INTERVIEW SUMMARY**

The Examiner is thanked for the courtesies extended during a telephonic interview conducted with the undersigned on February 17, 2011. During the interview, the foregoing amendments and the pending rejections under 35 USC § 103 were discussed. The Examiner agreed that the pending rejection of claim 36 under 35 USC § 103 should be withdrawn because the claim recites the transitional phrase "consisting of" in the preamble. See Examiner's Interview Summary dated February 28, 2011 ("Attorney presented arguments that the combination of references is not proper because the 'consisting of' language excludes additional components such as surfactants of the prior art in preparing vitamin powder compositions of claimed particle sizes. ***It was agreed*** that the rejection of claim 36 ***should be withdrawn*** in light of the above argument.") (emphasis added). Therefore, in view of the amendments and

remarks below, withdrawal of the rejections and allowance of the claims are respectfully requested.

***Obviousness Rejections***

A. Claims 1, 3-14, 17, and 28-35 over Auweter in view of Antoshkiw or Auweter and Stein in view of Antoshkiw

Claims 1, 3-14, 17, and 28-35 were rejected under 35 U.S.C. § 103(a) as obvious over either U.S. Patent No. 5,968,251 to Auweter ("Auweter") in view of U.S. Patent No. 3,998,753 to Antoshkiw et al. ("Antoshkiw") or Auweter and EP 937412 to Stein *et al.* ("Stein") in view of Antoshkiw. (Paper No. 20101013 at 2).

Auweter, Stein, and Antoshkiw have been previously summarized on the record.

In making the rejection, the Examiner made the same assertions regarding Auweter and Stein as in the Final Office Action dated April 1, 2009, Paper No. 200903330, at 2-4. (Paper No. 20101013 at 2-5). For a summary of these assertions, see the Submission Under 37 CFR § 1.114 Including Amendment; Response to Final Office Action dated December 2, 2009 at 14-15.

In making the present rejection, the Examiner also asserted the following:

Antoshkiw [et al.] (cited in the introduction section of EP reference) US Patent 3,998,753 describes a batch process for the preparation of a water dispersible carotenoid containing powder, wherein the carotenoid has a particle size of less than 1 micron, which process comprises (a) forming a solution of a carotenoid and an antioxidant in a volatile solvent, said solvent being selected from the group consisting of halogenated aliphatic hydrocarbons such as chloroform, carbon tetrachloride and methylene chloride; (b) forming an aqueous solution of sodium lauryl sulfate, a water soluble carrier composition such as e.g. gelatin, a preservative and a stabilizer, and adjusting said solution to a

pH of about 10 to 11 and (c) forming an emulsion of the solutions of steps (a) and (b) by mixing at a high speed and high shear; removing the organic solvent and spray drying the resulting emulsion to obtain a carotenoid powder. In col. 2, L 16-24, the above reference teaches high optical clarity of the water dispersible powders of carotenoids and further teaches that high speed emulsification employed in the process involves high shear that is essential for obtaining a small particle size (col. 3, L 33-62). The reference also states that the effective shear force is a function of viscosity, solid content, speed of mixing, geometry of mixer and mixing vessel. Furthermore, the reference teaches in order to keep the particle size below 0.1 microns (<100 nm), one has to employ high shear force and high speed mixing.

Thus, a skilled artisan would have been able to prepare the desired particle sizes of carotenoids of Auweter and EP, in particular below 0.1 microns, by optimizing the mixing speed and high shear force such that when dispersed in water the powder results in high optical clarity. Examiner notes that claim 29 recites particle size 80-120 nm, which is within the size range (<400 nm) of EP reference. Thus, applicants have not shown any evidence that one of an ordinary skill in the art would not be able to arrive at the claimed particle sizes with the method of Auweter and/or [sic] EP.

With respect to claims 29-35, the claims are directed to a product and not a process. While it is noted that the product claims recite the process limitations, even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself .... The examiner notes that the product of claim 29 is no different from the product of claim 1 and hence the process steps do not determine the patentability of the claims. [Paper No. 20101013 at 3-5].

With a view towards furthering prosecution, claim 1 has been cancelled and claims 3-14, 17, and 28 now depend from non-rejected independent claim 36 (which recites the transitional phrase "consisting of" in the preamble and was discussed during the telephonic interview conducted with the undersigned on February 17, 2011). In addition, with a view towards furthering prosecution, claim 29 has been amended to recite the transitional phrase "consisting of" in the preamble. Thus, in view of the

foregoing amendments, it is believed that the rejection of claims 3-14, 17, and 28-35 is now rendered moot. Accordingly, withdrawal of the rejection is respectfully requested.

B. Claims 15 and 36-37 over Auweter in view of Antoshkiw or Auweter and Stein in view of Antoshkiw, and further in view of Emodi

Claims 15 and 36-37 were rejected as obvious over Auweter in view of Antoshkiw or Auweter and Stein in view of Antoshkiw as applied to claims 1, 3-14, 17 and 28-35 above, and further in view of Emodi *et al.*, U.S. Patent No. 3,886,294 ("Emodi"). (Paper No. 20101013 at 5).

Auweter, Stein, Antoshkiw, and Emodi have been previously summarized on the record.

In making the rejection, the Examiner made the same assertions as in the Final Office Action dated April 1, 2009, Paper No. 200903330, at 4. (Paper No. 20101013 at 5-6). For a summary of these assertions, see the Submission Under 37 CFR § 1.114 Including Amendment; Response to Final Office Action dated December 2, 2009 at 30-31.

In making the present rejection, the Examiner also asserted the following:

Emodi also teaches a powder preparation of carotenoids wherein the powder is prepared by mixing fish gelatin with carotenoids crystals and spray drying the resultant solution to a form a stable powder of moisture content less than 2% (example 1 in col. 4). Thus, it would have been obvious for one of an ordinary skill in the art at the time of the instant invention to prepare the powders of Auweter or Auweter and EP by spray drying where the final moisture content is less than 2% because Emodi suggests stability of the powders. A skilled artisan would have expected the powders of Auweter to be stable. [Paper No. 20101013 at 6].

With a view towards furthering prosecution, claims 15 and 37 have been cancelled. As discussed above, the Examiner agreed that the above rejection of claim 36 should be withdrawn because the claim recites the transitional phrase "consisting of" in the preamble. See Examiner's Interview Summary dated February 28, 2011 ("Attorney presented arguments that the combination of references is not proper because the 'consisting of' language excludes additional components such as surfactants of the prior art in preparing vitamin powder compositions of claimed particle sizes. ***It was agreed*** that the rejection of claim 36 ***should be withdrawn*** in light of the above argument.") (emphasis added). Therefore, in view of the amendments and remarks above, withdrawal of the rejection and allowance of the claims are respectfully requested.

### ***Double Patenting***

The Examiner asserted that "[i]n their response dated 12-7-09, applicants agreed to file a terminal disclaimer upon indicating allowable subject matter. However, at this time no allowable subject matter is indicated. Therefore, the rejection is maintained." (Paper No. 20101013 at 12).

As previously stated, upon indication of allowable subject matter, a Terminal Disclaimer will be submitted.

Application No.: 09/726,880  
Response Dated: April 26, 2011  
Response to Final Action of: October 26, 2010

For the reasons set forth above, entry of the amendments, withdrawal of the rejections, and allowance of the claims are respectfully requested. If the Examiner has any questions regarding this paper, please contact the undersigned.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on April 26, 2011.

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